AMENDMENTS TO THE SPECIFICATION

In the Specification:

Please replace the paragraph beginning at page 3, line 21 with the following amended paragraph:

[[FIG.2]] FIG. 2 is a diagram showing explicit and implicit training of a document classifier, according to an embodiment of the invention;

Please replace the two paragraphs beginning at page 9, line 15 with the following amended paragraphs:

The computer 20 may operate in a networked environment using logical connections to one or more remote computers, such as remote computer 49. These logical connections are achieved by a communication device coupled to or a part of the computer 20; the invention is not limited to a particular type of communications device. The remote computer 49 may be another computer, a server, a router, a network PC, a client, a peer device or other common network node, and typically includes many or all of the elements described above relative to the computer 20, although only a memory storage device 50 has been illustrated in FIG. 1. The logical connections depicted in FIG. 1 include a local-area network (LAN) 51 and a wide-area network (WAN) 52. Such networking environments are commonplace in office networks, enterprise-wide computer networks, intranets and the ~~Internal~~ Internet, which are all types of networks.

When used in a LAN-networking environment, the computer 20 is connected to the local network 51 through a network interface or adapter 53, which is one type of communications device. When used in a WAN-networking environment, the computer 20 typically includes a modem 54, a type of communications device, or any other type of communications device for establishing communications over the wide area network 52, such as the ~~Internal~~ Internet. The modem 54, which may be internal or external, is connected to the system bus 23 via the serial port interface 46. In a networked

environment, program modules depicted relative to the personal computer 20, or portions thereof, may be stored in the remote memory storage device. It is appreciated that the network connections shown are exemplary and other means of and communications devices for establishing a communications link between the computers may be used.

Please replace the two paragraphs beginning at page 15, line 22 with the following amended paragraphs:

Furthermore, still referring to FIG. 2, implicit training of the document classifier 200, as represented by the arrow 204, can be conducted by continually watching the user work in 210. The assumption is that as users work, and lists of mail are reviewed, time-critical messages are read first, and low-priority messages are reviewed later, or just deleted. That is, when presented with a new email, the user is watched to determine whether he or she immediately opens the email, and in what order (if more than one new email are present), deletes the email without opening, and/or replies to the email right away. Thus, the document classifier is such that a user is continually watched while working, and the classifier is continually refined by training in the background and being updated in real time for decision making. For each message inputted into the classifier, a new case for the classifier is created. The cases are stored as negative and positive examples of documents that are either high or low priority.

Referring next to FIG. 3, a document, such as an email message[[,]] 300, is input into the document classifier 200, which based thereon generates a priority 302 for the document 300. That is, in one embodiment, the document classifier 200 generates a priority 302, measured as a percentage from 0 to 1 (i.e., 0% to 100%). This percentage is a measure of the likelihood that the document 300 is of high priority, based on the previous training of the classifier 200.

Please replace the paragraph beginning at page 17, line 8 with the following amended paragraph:

The invention is not limited to the definition of priority as this term is used by the document classifier to assign such priority to a document such as an email message. In one embodiment, however, priority is defined in terms of a loss function. More specifically, priority is defined in terms of the expected cost in lost opportunities per time delayed in reviewing the document after it has [[be]] been received – that is, the expected [[lost]] loss or cost that will result for delayed processing of the document. This loss function can further vary according to the type of document received.

Please replace the paragraph beginning at page 20, line 8 with the following amended paragraph:

However, this formulation is not entirely accurate, because the user is assumed to review the message on his or her own at some point in the future anyway. Therefore, in actuality, the user should be alerted when the expected value of alerting, referred to as [[ECA]] EVA, is positive. The expected value of alerting should thus consider the value of alerting the user of the document now, as opposed to the value of the user reviewing the message later on his or her own, without alert, minus the cost of alerting. This can be stated as

$$EVA = EL_{alert} - EL_{no\text{-}alert} - EC$$

where EL_{alert} is the expected loss of the user reviewing the message if he or she were to review the message now, upon being alerted, as opposed to $EL_{no\text{-}alert}$, which is the expected loss of the user reviewing the message on his or her own at some point, without being alerted, minus EC, the expected cost of alerting (now).

Please replace the paragraph beginning at page 22, line 1 with the following amended paragraph:

It is also important to know how busy the user is in making decisions about interrupting the user with information about messages with high time criticality. In one embodiment, it is reasoned about whether and the rate at which a user is working on a computer, or whether the user is on the telephone, speaking with someone, or at a meeting at another location. In one embodiment, several classes of evidence can be used to [[asses]] assess a user's activity or his or her focus of attention, as shown in FIG. 6. A Bayesian network, as known in the art, can then be used for performing an inference about a user's activity; an example of such a network is shown in FIG. 7. Utilizing evidence to infer whether the user is present is described more rigorously in the cofiled, copending and coassigned application entitled "A Computational Architecture for Managing the Transmittal and Rendering of Information, Alerts, and Notifications" [docket no. 1018.024US1], which has already been incorporated by reference (specifically, with respect to determining an alert-reception probability). Thus, in one embodiment, a probability inference as to whether a user is present is determined in accordance with the description provided in this application.

Please replace the paragraph beginning at page 23, line 11 with the following amended paragraph:

In still another embodiment, the decision as to when and how to ~~alerts~~ alert users is made by employment of a set of user-specified thresholds and parameters defining policies on alerting. In this embodiment, user presence can be inferred based on mouse or keyboard activity. Thus, a user can be allowed to input distinct thresholds on alerting for inferred states of activity and nonactivity. Users can input an amount of idle activity following activity where alerting will occur at lower criticalities. In this embodiment, if it is determined that the user is not available based on the time that no computer activity is seen – or on the user's inactivity when an attempt to alert is made – then messages [[and]] are stored, and are reported to the user in order of criticality when the user returns to interact with the computer (or, returns to the room, given the availability of inputs from infrared or other presence detection).

Please replace the paragraph beginning at page 25, line 21 with the following amended paragraph:

The program 950 generates a document for input into the document classifier 952. In one embodiment, the program includes an electronic mail program that receives email, which then [[serve]] serves as the document. The document classifier 952, based on the document, generates a priority thereof, as has been described. In one embodiment, the document classifier 952 is a Bayesian document classifier, while in another embodiment, it is a Support Vector Machine classifier. The priority of the document output by the document classifier 952 can then be used in further conjunction with a cost-benefit analysis, as has been described, to effectuate further output and/or alerting based thereon, as has been described. The invention is not so limited, however.